



## E85 Emissions Study

### Subcontractor

Coordinating Research Council, Inc.

### Principal Investigator

Jack D. Benson  
Fuels and Lubricants Department  
GM Research and Development Center  
30500 Mound Road 1-6, Box 9055  
Warren, MI 48090-9055  
(810) 986-1919

### DOE Project Manager

Michael Gurevich  
U.S. Department of Energy  
CE-332, MS 6A-116/Forrestal  
1000 Independence Avenue, SW  
Washington, D.C. 20585  
(202) 586-6104

### NREL Technical Monitor

Brent Bailey  
NREL  
1617 Cole Boulevard  
Golden, CO 80401  
(303) 275-4468

### Performance Period

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### NREL Subcontract Administrator

Scott Montgomery (303) 275-3193

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AF-2-11296-06

### Objective

To evaluate the effect of 85% ethanol (EtOH) blended with 15% gasoline fuel on exhaust and evaporative emissions, toxics, and reactivity in prototype flexible fuel vehicle (FFV) and variable fuel vehicle (VFFV) models.

### Approach

Three prototype original equipment manufacturer (OEM) vehicles calibrated to run on gasoline or any mixture of EtOH and gasoline up to 85% EtOH will be emission tested on an industry average gasoline (IAG), a California Phase 2 reformulated gasoline (RFG), and E85



*Test vehicle on the chassis dynamometer*

(85% EtOH, 15% gasoline) blended with the California Phase 2 RFG. Tailpipe and engine-out mass emissions and tailpipe species will be measured during the Federal Test Procedure (FTP). Hot-soak evaporative emission tests will also be run with each fuel.

### Accomplishments

All tests have been completed and the data are being analyzed.

### Future Direction

These same vehicles and fuels will be tested in a dynamometer study of off-cycle exhaust emissions.

### Publications

Benson, J.D. 1995. "Emissions from E85 Ethanol Fuel and Gasoline in Flexible/Variable Fuel Vehicles." Presented at the 1995 SAE International Congress & Exposition, Detroit, MI. March.

Benson, J.D. 1995. "Emissions with E85 and Gasolines and Flexible/Variable Fuel Vehicles," SAE Paper #952508.

Benson, J.D. 1995. CRC Auto/Oil Technical Bulletin #16.